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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/820,874	03/30/2001	Stanislaw Wladyslaw Janisiewicz	00702.00019	3636

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EXAMINER

JONES, JUDSON

ART UNIT PAPER NUMBER

2834

DATE MAILED: 09/16/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/820,874

Applicant(s)

JANISIEWICZ ET AL.

Examiner

Judson H Jones

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4,5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 8-12 and 18-20 rejected under 35 U.S.C. 102(b) as being anticipated by Bonner et al. 4,037,122 (cited by Applicant). Bonner et al. discloses a motor core 21 having tooth members 25 with tip and base portions with the tip member being concavely curved.

In regard to claim 8, see Bonner et al. column 3 lines 18-24.

In regard to claims 9 and 19, see Bonner et al. column 3 lines 24-27. When the motor is operated, current flows to the coils creating a magnetic field that causes flux to be received by the tooth surface.

In regard to claims 10 and 20, see elements 17 and 18 in figure 2.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any

Art Unit: 2834

evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 3-5 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bonner et al. in view of Singapore Institute of Standards and Industrial Research (British reference 2 260 860 A cited by Applicant).

In regard to claims 3, 5, 13 and 15, Bonner et al. discloses a curved tooth surface but since the drawings are not necessarily precise, it is impossible to tell if the tooth surface is constantly curved. However the British reference describes tooth shape in considerable detail. Figure 2 of the British reference discloses a prior art tooth having two straight sides 25, 27 and curved portions 33, 35. Figure 4 of the British reference shows a tooth having a tip portion 123, 125 with a substantially constant curvature and teaches that this tooth geometry increases torque approximately 15 to 30% over square cut teeth. Since Bonner et al. and the British reference are both from the same field of endeavor, it would have been obvious at the time the invention was made for one of ordinary skill in the art to have utilized a substantially constant curvature for the tip portion of a tooth in order to increase the torque of the motor.

In regard to claims 4 and 14, see the British reference figure 6. As described on page 8 of the British reference, the difference between figures 4 and 6 is that discontinuities are eliminated in figure 6. As the British reference explains on pages 3 and 4, the edges which cause the discontinuities present difficulties in making dies for punching out laminations and cause a reduced life for the dies. Since Bonner et al. and the British reference are both from the same

Art Unit: 2834

field of endeavor, it would have been obvious at the time the invention was made for one of ordinary skill in the art to have made laminations without discontinuities in order to increase the life of the dies for making the laminations.

Claims 6, 7, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bonner et al. as modified by the British reference and further in view of Konecny 4,647,802. Bonner et al. as modified by the British reference discloses the motor but does not disclose the relative areas of the tip portions and base portions. However Konecny teaches that relationship as a design variable and teaches the effects of changing that relationship. See Konecny column 1 lines 52-67. In regard to claims 6 and 16, since Konecny and Bonner et al. as modified by the British reference are both from the same field of endeavor, it would have been obvious at the time the invention was made for one of ordinary skill in the art to have increased the number of stator and rotor teeth and thus reduced the base portion of the teeth in order to increase the holding torque at a stable detent position. In regard to claims 7 and 17, since Konecny and Bonner et al. as modified by the British reference are both from the same field of endeavor, it would have been obvious at the time the invention was made for one of ordinary skill in the art to have decreased the number of stator and rotor teeth and thus increased the base portion of the teeth in order to decrease flux leakage and thus improve the efficiency of the motor.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Judson H Jones whose telephone number is 703-308-0115. The examiner can normally be reached on 8-4:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on 703-308-1371. The fax phone numbers for the

Application/Control Number: 09/820,874

Page 5

Art Unit: 2834

organization where this application or proceeding is assigned are 703-305-3431 for regular communications and 703-305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

JHJ
September 12, 2002

Julian Jones
AU 2834